

BIOOXIDATION CAPABILITIES OF *CANDIDA SP*

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RESEARCH OR DEVELOPMENT

This invention was made with the United States Government support under Cooperative Agreement # 70NANB8H4033 awarded by NIST. The United States Government has certain rights in the invention.

BACKGROUND

This application claims the benefit under 35 U.S.C. §119(e) of earlier filed and copending U.S. Provisional Application No. 60/190,626, filed March 20, 2000, the contents of which are incorporated herein by reference.

1. Technical Field

The present invention relates to the use of yeast strains to modify substrates via biooxidation. More particularly, the present invention relates to processes for converting certain substrates into alcohols or carboxylic acids utilizing yeast.

2. Background of Related Art

Aliphatic dioic acids, alcohols and compounds having combinations of alcohols and acids are versatile chemical intermediates useful as raw materials for the preparation of adhesives, fragrances, polyamides, polyesters, and antimicrobials. While chemical routes for the synthesis of long-chain α,ω -dicarboxylic acids are available, the synthesis is complicated and results in mixtures containing dicarboxylic acids of shorter chain lengths. As a result, extensive purification steps are necessary. While it is known that long-chain dioic acids can also be produced by microbial transformation of alkanes, fatty acids or esters, chemical synthesis has remained the preferred route, presumably due to limitations with the previously available biological approaches.